UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,127	06/06/2001	Theodore F. Rabenko	1875.0630001	7884

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EXAMINER
WILSON, ROBERT W

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/874,127	RABENKO, THEODORE F.
	Examiner	Art Unit	
	Robert W. Wilson	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _06 June 2001_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-24_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-24_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _6/26/02_.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claims 1-2, 5-7, 15-16, & 19-20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Doshi (U.S. Patent No.: 6,219,339) in view of Hoshi (Proposal of a Method of

for Voice Stream Multiplexing for IP Telephony Systems).

Referring to claim 1, Doshi teaches: Figure 2 which is a telephony system. 715 per Fig 2
consists of a plurality of modules (1st voice processing module and a second voice processing
module). Each of the modules compresses, packetizes, and transfers the digital voice packets to
the queue or buffer for each of the separate VOICE SOURCES or subscriber lines. 715 per Fig 2
has a first processing voice module and a second voice processing module. The SCHEDULER
is the host processor which is coupled through the 725 and 720 to the 715 per Fig 2. 720 is a
buffer or QUEUE which is coupled to the plurality of modules in 715 per Fig 2. The VOICE
SOURCES per Fig 2 are the subscriber lines.

Doshi does not expressly call for: assembling a packet comprising said first voice packet and
said second voice packet but teaches transmitting the scheduled packets to VC or data network
per Fig 2.

Hoshi teaches: assembling multiple voice packets per Fig 5 before transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to ad
the assembling of multiple voice packets of Hoshi to the scheduler of Doshi in order to lower the
overhead transmitting the packets.

In addition Doshi teaches:
Regarding claim 2, the modules in 715 per Fig 2 process the encoded VOICE SOURCES in
parallel.

Regarding claim 5, the reference teaches separate modules in 715 per Fig 2. It would have been
obvious to one of ordinary skill in the art at the time of the invention to call each module a digital
signal processor because each module performs packetization and compression.

Regarding claim 6, 710 per Fig 2 consist of a plurality of modules which convert VOICE SOURCES or subscriber lines to digital or first and second audio modules.

Regarding claim 7, 710 per Fig 2 consist of a plurality of modules which convert VOICE SOURCES or subscriber lines to digital or first and second audio modules.

Referring to claim 15, Doshi teaches: Figure 2 which is a telephony system. Since "reducing delay" appears only in the preamble and is not a limitation in the claims the examiner has interpreted "reducing delay" as intended use. 715 per Fig 2 consists of a plurality of modules (1st voice processing module and a second voice processing module). Each of the modules compresses, packetizes, and transfers the digital voice packets to the queue or buffer for each of the separate VOICE SOURCES or subscriber lines. 715 per Fig 2 has a first processing voice module and a second voice processing module each of which receives an input called VOICE SOURCES or subscriber lines. The SCHEDULER is the host processor which is coupled through the 725 and 720 to the 715 per Fig 2. 720 is a buffer or QUEUE which is coupled to the plurality of modules in 715 per Fig 2. The VOICE SOURCES per Fig 2 are the subscriber lines.

Doshi does not expressly call for: assembling a packet comprising said first voice packet and said second voice packet but teaches transmitting the scheduled packets to VC or data network per Fig 2.

Hoshi teaches: assembling multiple voice packets per Fig 5 before transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to ad the assembling of multiple voice packets of Hoshi to the scheduler of Doshi in order to lower the overhead transmitting the packets.

In addition Doshi teaches:
Regarding claim 16, the modules in 715 per Fig 2 process the encoded VOICE SOURCES in parallel.
Regarding claim 19, the reference teaches separate modules in 715 per Fig 2. It would have been obvious to one of ordinary skill in the art at the time of the invention to call each module a digital signal processor because each module performs packetization and compression.

Regarding claim 20, 710 per Fig 2 consist of a plurality of modules which convert analog VOICE SOURCES or subscriber lines to digital or first and second audio modules.
Regarding claim 13, the reference teaches a plurality of VOICE SOURCES or subscriber lines which receive analog voice signals per Fig 2.

3.   Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi (U.S.

Patent No.: 6,219,339) in view of Hoshi (Proposal of a Method of for Voice Stream Multiplexing

for IP Telephony Systems) further in view of Seo (An Implementation of VoIP Cable Modem)

Referring to claim 9, Doshi teaches: Figure 2 which is a telephony system. 715 per Fig 2 consists of a plurality of modules (1st voice processing module and a second voice processing module). Each of the modules compresses, packetizes, and transfers the digital voice packets to the queue or buffer for each of the separate VOICE SOURCES or subscriber lines. 715 per Fig 2 has a first processing voice module and a second voice processing module. The SCHEDULER is the host processor which is coupled through the 725 and 720 to the 715 per Fig 2. 720 is a buffer or QUEUE which is coupled to the plurality of modules in 715 per Fig 2. The VOICE SOURCES per Fig 2 are the subscriber lines.

Doshi does not expressly call for: cable modem device including a cable modem or assembling a packet comprising said first voice packet and said second voice packet but teaches transmitting the scheduled packets to VC or data network per Fig 2.

Hoshi teaches: assembling multiple voice packets per Fig 5 before transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the assembling of multiple voice packets of Hoshi to the scheduler of Doshi in order to lower the overhead transmitting the packets.

The combination of Doshi and Hoshi do not expressly call for: a cable modem device including a cable mode but teaches VoIP per Hoshi.

Seo teaches conversion of packets to VoIP in a cable modem device including a cable mode per Pgs 1532-1534.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the cable modem device including the cable modem of Seo to the device of the combination of Doshi and Hoshi in order to transmit VoIP packets over a cable network.

In addition Doshi teaches:

Regarding claim 10, the modules in 715 per Fig 2 process the encoded VOICE SOURCES in parallel.

Regarding claim 11, the reference teaches separate modules in 715 per Fig 2. It would have been obvious to one of ordinary skill in the art at the time of the invention to call each module a digital signal processor because each module performs packetization and compression.

Regarding claim 12, 710 per Fig 2 consist of a plurality of modules which convert VOICE SOURCES or subscriber lines to digital or first and second audio modules.

Regarding claim 13, the reference teaches a plurality of VOICE SOURCES or subscriber lines which receive voice or audio signals per Fig 2.

Referring to claim 21, Doshi and Hoshi teach: the method of claim 1 and receiving analog vice signals from VOICE SOURCES or a plurality of subscriber lines or first and second analog voice subscriber lines.

The combination of Doshi and Hoshi do not expressly call for: subscriber line interface circuit but teaches VOICE SOURCES.

Seo teaches: SLIC per per 1533

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the SLIC of Seo to encoder of the combination of Doshi and Hoshi in order to receive voice signals for transmission over a cable network.

4.   Claims 3, 4, 8, 17-18, & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Doshi (U.S. Patent No.: 6,219,339) in view of Hoshi (Proposal of a Method of for Voice

Stream Multiplexing for IP Telephony Systems) in view of Data-Over-Cable Service Interface

Specifications Radio Frequency Interface Specification henceforth DOCSIS.

Referring to claim 3, the combination of Doshi and Hoshi teaches the telephony system of claim 1 as well as a host processor which transmits assembled packets over a network.
The combination of Doshi and Hoshi do not expressly call for: HFC network. DOCSIS teaches: HFC per Para 1.3.1 per Pg 1 and Fig 1 per Pg 2. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the HFC media of DOCSIS to the device of the combination of Doshi and Hoshi which transmits assembled packets over a network media because the HFC media is a super fast media.

Referring to claim 4, the combination of Doshi, Hoshi, 7 DOCSIS teaches the telephony system of claim 3, wherein the host processor is adapted to transmit said assembled packets for delivery over an HFC network. The combination of Doshi, Hosi, and DOCSIS do not expressly call for: transmitting during assigned upstream burst opportunity.

DOCSIS teaches: transmitting during assigned upstream burst opportunity per Pg 103-115.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the transmitting during assigned upstream bursts of DOCSIS to the device of the combination of Doshi, Hoshi,, and DOCSIS in order to insure that the upstream transmissions do not interfere with each other.

Referring to claim 8, the combination of Hoshi and Doshi teaches the telephony system of claim 1.

The combination of Doshi and Hoshi do not expressly call for: packets comprising physical layer overhead, and media access layer overhead but teaches an assembled first and second voice packet. DOCSIS teaches: Physical layer and media access layer are utilized in cable modem devices per Pgs 12-20. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the physical layer and media access layer of DOCSIS to the assembled packet of the combination of Doshi and Hoshi in order to send the assembled packet over a cable network because the HFC media is a super fast media

Referring to claim 14, the combination of Doshi and Hoshi teaches the telephony system of claim 14.
The combination of Doshi and Hoshi do not expressly call for: packets comprising physical layer overhead, and media access layer overhead but teaches an assembled first and second voice packet. DOCSIS teaches: Physical layer and media access layer are utilized in cable modem devices per Pgs 12-20. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the physical layer and media access layer of DOCSIS to the assembled packet of the combination of Doshi and Hoshi in order to send the assembled packet over a cable network because the HFC media is a super fast media

Referring to claim 17, the combination of Doshi and Hoshi teaches the telephony system of claim 15, wherein the host processor is adapted to transmit said assembled packets for delivery over an HFC network. The combination of Doshi and Hoshi do not expressly call for: transmitting during assigned upstream burst opportunity.

DOCSIS teaches: transmitting during assigned upstream burst opportunity per Pg 103-115.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the transmitting during assigned upstream bursts of DOCSIS to the device of the combination of Doshi and Hoshi in order to insure that the upstream transmissions do not interfere with each other.

Referring to claim 18, the combination of Doshi and Hoshi teaches the telephony system of claim 15, wherein the host processor is adapted to transmit said assembled packets for delivery over an HFC network. The combination of Doshi and Hoshi does not expressly call for: transmitting during assigned upstream burst opportunity.

DOCSIS teaches: transmitting during assigned upstream burst opportunity per Pg 103-115.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the transmitting during assigned upstream bursts of DOCSIS to the device of the combination of Doshi and Hoshi in order to insure that the upstream transmissions do not interfere with each other.

Referring to claim22, the combination of Hoshi and Doshi teaches the telephony system of claim 15.
The combination of Doshi and Hoshi do not expressly call for: packets comprising physical layer overhead, and media access layer overhead but teaches an assembled first and second voice packet.

DOCSIS teaches: Physical layer and media access layer are utilized in cable modem devices per Pgs 12-20.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the physical layer and media access layer of DOCSIS to the assembled packet of the combination of Doshi and Hoshi in order to send the assembled packet over a cable network because the HFC media is a super fast media

5.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi (U.S.

Patent No.: 6,219,339) in view of Hoshi (Proposal of a Method of for Voice Stream Multiplexing

for IP Telephony Systems) in view of Seo (An Implementation of VoIP Cable Modem) further in

view of Data-Over-Cable Service Interface Specifications Radio Frequency Interface

Specification henceforth DOCSIS.

6.

Referring to claim 14, the combination of Doshi, Hoshi and Seo teaches the telephony system of claim 14.
The combination of Doshi, Hoshi, and Seo do not expressly call for: packets comprising physical layer overhead, and media access layer overhead but teaches an assembled first and second voice packet.

DOCSIS teaches: Physical layer and media access layer are utilized in cable modem devices per Pgs 12-20.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the physical layer and media access layer of DOCSIS to the assembled packet of the combination of Doshi, Hoshi, and Seo in order to send the assembled packet over a cable network because the HFC media is a super fast media

7.   Claims 23 & 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi

(U.S. Patent No.: 6,219,339) in view of Hoshi (Proposal of a Method of for Voice Stream

Multiplexing for IP Telephony Systems) further in view of Bertagna (U.S. Patent No.:

6,088,745).

Referring to claim 23, Doshi and Hoshi teaches: the method of claim 15, wherein the first voice packet and second voice packet is transferred to a queue or buffer.

The combination of Doshi and Hoshi does not expressly call for: a first and second DMA transfer but teaches transfer from memory.

Bertagna teaches: DMA transfer from memory per col. 1 line 7-col. 2 line 12 and col. 3 line 40-col. 4 line 5 and

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the DMA transfer of Bertagna to the device of the combination of Doshi and Hoshi in order to avoid contention between packets being transferred.

Referring to claim 24, the combination of Doshi and Hoshi teach: the method of claim 15. The specification defines that a segmented DMA transfer is the same as a linked list DMA transfer per Pg 17 Para [0065]

Bertagna teaches: linked list DMA or segmented DMA transfer per col. 1 line 7-col. 2 line 12 and col. 3 line 40-col. 4 line 5

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the linked list or segmented the DMA transfer of Bertagna to the method of the combination of Doshi and Hoshi in order to avoid contention between packets being transferred

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

1.   Goldberg, U.S. Patent No.: 6,389,038 dated 5/16/02 in which he discloses combining two

voice pacets together per frame per Fig 3 or per col. 3 lines 30-41.

2.   Christensen, U.S. Patent No.: 5,905,727 dated 5/18/1999 in which he discloses cells with

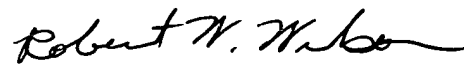different separate headers per Fig 2 in which they are assembled with a combined header per Fig

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3.   Oguchi, U.S. Patent No.: 6,907,042 dated 6/14/2005 in which he discloses DMA transfer

between memories per Fig 6 or per col. 12 lines 6-15.

8.0   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075.

The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert W Wilson
Examiner
Art Unit 2661

RWW
6/15/05

BOB PHUNKULH
PRIMARY EXAMINER